

# Andrey V Dunaev

## List of Publications by Year in descending order

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Version: 2024-02-01

101  
papers

858  
citations

471509

17  
h-index

610901

24  
g-index

103  
all docs

103  
docs citations

103  
times ranked

479  
citing authors

#	ARTICLE	IF	CITATIONS
1	Diagnosis of Skin Vascular Complications Revealed by Time-Frequency Analysis and Laser Doppler Spectrum Decomposition. <i>IEEE Transactions on Biomedical Engineering</i> , 2023, 70, 3-14.	4.2	6
2	Fluorescence lifetime needle optical biopsy discriminates hepatocellular carcinoma. <i>Biomedical Optics Express</i> , 2022, 13, 633.	2.9	8
3	Optical Diagnostics of the Maxillary Sinuses by Digital Diaphanoscopy Technology. <i>Diagnostics</i> , 2021, 11, 77.	2.6	10
4	Laser Doppler Spectrum Analysis Based on Calculation of Cumulative Sums Detects Changes in Skin Capillary Blood Flow in Type 2 Diabetes Mellitus. <i>Diagnostics</i> , 2021, 11, 267.	2.6	9
5	Optical Diagnostics in Human Diseases. <i>Diagnostics</i> , 2021, 11, 873.	2.6	3
6	Spatial heterogeneity of cutaneous blood flow respiratory-related oscillations quantified via laser speckle contrast imaging. <i>PLoS ONE</i> , 2021, 16, e0252296.	2.5	7
7	The Discrete Analysis of the Tissue Biopsy Images With Metamaterial Formalization: Identifying Tumor Locus. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2021, 27, 1-8.	2.9	1
8	Impairments of cerebral blood flow microcirculation in rats brought on by cardiac cessation and respiratory arrest. <i>Journal of Biophotonics</i> , 2021, 14, e202100216.	2.3	16
9	Multimodal Laparoscopic System for Biological Tissue Perfusion and Metabolism Assessment. , 2021, , .		0
10	Fluorescence lifetime optical biopsy of the hepatocellular carcinoma in murine model. , 2021, , .		0
11	A complex morphofunctional approach for zinc toxicity evaluation in rats. <i>Heliyon</i> , 2020, 6, e03768.	3.2	3
12	Testing a Fine-Needle Optical Probe for Recording Changes in the Fluorescence of Coenzymes of Cellular Respiration. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2020, 128, 742-751.	0.6	4
13	Adrenaline induces calcium signal in astrocytes and vasoconstriction via activation of monoamine oxidase. <i>Free Radical Biology and Medicine</i> , 2020, 159, 15-22.	2.9	24
14	Optical percutaneous needle biopsy of the liver: a pilot animal and clinical study. <i>Scientific Reports</i> , 2020, 10, 14200.	3.3	21
15	Heterogeneity of cutaneous blood flow respiratory-related oscillations quantified via LSCI wavelet decomposition. , 2020, , .		1
16	Wearable Laser Doppler Flowmetry Sensor: A Feasibility Study with Smoker and Non-Smoker Volunteers. <i>Biosensors</i> , 2020, 10, 201.	4.7	15
17	Machine Learning Aided Photonic Diagnostic System for Minimally Invasive Optically Guided Surgery in the Hepatoduodenal Area. <i>Diagnostics</i> , 2020, 10, 873.	2.6	8
18	Interaction of Oxidative Stress and Misfolded Proteins in the Mechanism of Neurodegeneration. <i>Life</i> , 2020, 10, 101.	2.4	53

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19	Biophotonics methods for functional monitoring of complications of diabetes mellitus. Journal of Biophotonics, 2020, 13, e202000203.	2.3	19
20	Laser speckle contrast imaging of blood microcirculation in pancreatic tissues during laparoscopic interventions. Quantum Electronics, 2020, 50, 33-40.	1.0	21
21	Monitoring oxidative metabolism while modeling pancreatic ischemia in mice using a multimodal spectroscopy technique. Laser Physics Letters, 2020, 17, 115605.	1.4	7
22	Wearable laser Doppler flowmetry for the analysis of microcirculatory changes during intravenous infusion in patients with diabetes mellitus. , 2020, , .		1
23	Wearable laser Doppler sensors for evaluating the nutritive and shunt blood flow. , 2020, , .		1
24	Brain metabolism changes in cases of impaired breathing or blood circulation in rodents evaluated by real time optical spectroscopy methods. , 2020, , .		1
25	Analysis of experimental surgical lighting parameters in organs in vivo. , 2020, , .		1
26	Multimodal Optical Diagnostic in Minimally Invasive Surgery. , 2020, , 397-424.		1
27	Tissue mimicking phantoms for fluorescence imaging. , 2020, , .		1
28	Monte Carlo simulation of signals in digital diaphanoscopy of the maxillary sinuses. , 2020, , .		0
29	Time-frequency analysis and laser Doppler spectrum decomposition to reveal new feature space for diagnosis of diabetes mellitus vascular complications. , 2020, , .		0
30	Optical noninvasive diagnostics of dynamic changes in the level of blood microcirculation and oxidative metabolism using temperature tests. , 2020, , .		2
31	Method and a Device for Evaluating the Functional State of Microcirculatory-Tissue Systems of the Human Body Based on Multiparametric Optical Diagnostics. Journal of the Russian Universities Radioelectronics, 2020, 23, 77-91.	0.2	0
32	Multimodal Optical Diagnostics of the Microhaemodynamics in Upper and Lower Limbs. Frontiers in Physiology, 2019, 10, 416.	2.8	13
33	Wavelet Analysis of the Temporal Dynamics of the Laser Speckle Contrast in Human Skin. IEEE Transactions on Biomedical Engineering, 2019, 67, 1-1.	4.2	11
34	Fiber-Optic System for Intraoperative Study of Abdominal Organs during Minimally Invasive Surgical Interventions. Applied Sciences (Switzerland), 2019, 9, 217.	2.5	17
35	Optical probe pressure effects on cutaneous blood flow. Clinical Hemorheology and Microcirculation, 2019, 72, 259-267.	1.7	7
36	The study of the spectral characteristics of biological tissues for optimization of surgical lamp parameters. Journal of Physics: Conference Series, 2019, 1400, 066024.	0.4	2

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37	Optimization of Spectral Characteristics of the Controlled Color-Dynamic Surgical Light Source for Visualization of Organs and Tissues of Laboratory Animals. , 2019, , .		2
38	Dynamic evaluation of blood flow microcirculation by combined use of the laser Doppler flowmetry and high-speed videocapillaroscopy methods. Journal of Biophotonics, 2019, 12, e201800317.	2.3	33
39	Optical fine-needle aspiration biopsy in a rat model. , 2019, , .		4
40	Novel wearable VCSEL-based sensors for multipoint measurements of blood perfusion. , 2019, , .		2
41	Pilot studies of age-related changes in blood perfusion in two different types of skin. , 2019, , .		2
42	Optical fine-needle biopsy approach for intraoperative multimodal diagnostics in minimally invasive abdominal surgery. , 2019, , .		3
43	Wearable sensor system for multipoint measurements of blood perfusion: pilot studies in patients with diabetes mellitus. , 2019, , .		5
44	Studies of age-related changes in blood perfusion coherence using wearable blood perfusion sensor system. , 2019, , .		2
45	Optical diagnostics of bile duct tissues state with tumor compression. , 2019, , .		3
46	Investigation of blood microcirculation parameters in patients with rheumatic diseases by videocapillaroscopy and laser Doppler flowmetry during cold pressor test. , 2019, , .		0
47	Laser speckle contrast imaging of abdominal organs in mouse model. , 2019, , .		0
48	Fluorescence spectroscopy approach for blood influence compensation. , 2019, , .		0
49	Analysis of changes in blood flow oscillations under different probe pressure using laser Doppler spectrum decomposition. , 2019, , .		0
50	Diagnosis of inflammatory diseases of the paranasal sinuses using digital diaphanoscopy. , 2019, , .		0
51	Detection of angiospastic disorders in the microcirculatory bed using laser diagnostics technologies. Journal of Innovative Optical Health Sciences, 2018, 11, 1750016.	1.0	13
52	Possibilities of Using Dynamically Controlled Semiconductor Light Sources During Surgical Operations. , 2018, , .		3
53	Novel wearable VCSEL-based blood perfusion sensor. , 2018, , .		8
54	Spectral analysis of the blood flow in the foot microvascular bed during thermal testing in patients with diabetes mellitus. Microvascular Research, 2018, 120, 13-20.	2.5	36

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55	Allocation of rhodamine-loaded nanocapsules from blood circulatory system to adjacent tissues assessed in vivo by fluorescence spectroscopy. <i>Laser Physics Letters</i> , 2018, 15, 105601.	1.4	6
56	Laser doppler spectrum decomposition applied in diagnostics of microcirculatory disturbances. , 2018, , .		1
57	Fibre-optic probe for fluorescence diagnostics with blood influence compensation. , 2018, , .		3
58	Noninvasive control of rhodamine-loaded capsules distribution in vivo. , 2018, , .		0
59	Application of the fluorescence spectroscopy for the analysis of the state of abdominal cavity organs tissues in mini-invasive surgery. , 2018, , .		1
60	Blood flow oscillations as a signature of microvascular abnormalities. , 2018, , .		1
61	Evaluation of microvascular disturbances in rheumatic diseases by analysis of skin blood flow oscillations. , 2018, , .		0
62	Peculiarities of local blood microcirculation in patients with psoriasis. , 2018, , .		2
63	Use of fluorescent optical fibre probe for recording parameters of brain metabolism in rat model. , 2018, , .		0
64	Laser Doppler flowmetry in blood and lymph monitoring, technical aspects and analysis. <i>Proceedings of SPIE</i> , 2017, , .	0.8	8
65	Combined use of laser Doppler flowmetry and skin thermometry for functional diagnostics of intradermal finger vessels. <i>Journal of Biomedical Optics</i> , 2017, 22, 040502.	2.6	23
66	Evaluation of blood microcirculation parameters by combined use of laser Doppler flowmetry and videocapillaroscopy methods. <i>Proceedings of SPIE</i> , 2017, , .	0.8	3
67	Evaluation of microcirculatory disturbances in patients with rheumatic diseases by the method of diffuse reflectance spectroscopy. <i>Human Physiology</i> , 2017, 43, 222-228.	0.4	13
68	Non-invasive control of influence of polyethylene glycol on transport function of fluorescent colored liposomal nanoparticles. <i>Proceedings of SPIE</i> , 2017, , .	0.8	0
69	Noninvasive control of the transport function of fluorescent coloured liposomal nanoparticles. <i>Laser Physics Letters</i> , 2017, 14, 065603.	1.4	11
70	Non-invasive biomedical research and diagnostics enabled by innovative compact lasers. <i>Progress in Quantum Electronics</i> , 2017, 56, 1-14.	7.0	19
71	Analysis of skin blood microflow oscillations in patients with rheumatic diseases. <i>Journal of Biomedical Optics</i> , 2017, 22, 070501.	2.6	20
72	Investigation of Doppler spectra of laser radiation scattered inside hand skin during occlusion test. <i>Journal of Physics: Conference Series</i> , 2017, 929, 012063.	0.4	2

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73	A Method and a Device for Diagnostics of the Functional State of Peripheral Vessels of the Upper Limbs. <i>Bio-Medical Engineering</i> , 2017, 51, 46-51.	0.5	4
74	Optical redox ratio and endogenous porphyrins in the detection of urinary bladder cancer: A patient biopsy analysis. <i>Journal of Biophotonics</i> , 2017, 10, 1062-1073.	2.3	21
75	Application of optical non-invasive methods to diagnose the state of the lower limb tissues in patients with diabetes mellitus. <i>Journal of Physics: Conference Series</i> , 2017, 929, 012069.	0.4	1
76	Functional Changes in Blood Microcirculation in the Skin of the Foot during Heating Tests in Patients with Diabetes Mellitus. <i>Human Physiology</i> , 2017, 43, 693-699.	0.4	10
77	A Complex Approach to Noninvasive Estimation of Microcirculatory Tissue Impairments in Feet of Patients with Diabetes Mellitus using Spectroscopy. <i>Optics and Spectroscopy (English Translation of) Tj ETQq1 1 00784314 rgBT /Ove</i>		
78	Multimodal optical measurement for study of lower limb tissue viability in patients with diabetes mellitus. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	2.6	40
79	The influence of local pressure on evaluation parameters of skin blood perfusion and fluorescence. <i>Proceedings of SPIE</i> , 2017, , .	0.8	5
80	Assessment of tissue ischemia of nail fold precapillary zones using a fluorescence capillaroscopy. <i>Proceedings of SPIE</i> , 2017, , .	0.8	0
81	Study of the functional state of peripheral vessels in fingers of rheumatological patients by means of laser Doppler flowmetry and cutaneous thermometry measurements. , 2016, , .		6
82	Changes in autofluorescence based organoid model of muscle invasive urinary bladder cancer. <i>Biomedical Optics Express</i> , 2016, 7, 1193.	2.9	14
83	How the melanin concentration in the skin affects the fluorescence-spectroscopy signal formation. <i>Journal of Optical Technology (A Translation of Opticheskii Zhurnal)</i> , 2016, 83, 43.	0.4	24
84	The development of attenuation compensation models of fluorescence spectroscopy signals. <i>Proceedings of SPIE</i> , 2016, , .	0.8	7
85	Computational model of bladder tissue based on its measured optical properties. <i>Journal of Biomedical Optics</i> , 2016, 21, 025006.	2.6	22
86	The blood perfusion and NADH/FAD content combined analysis in patients with diabetes foot. <i>Proceedings of SPIE</i> , 2016, , .	0.8	6
87	Optical non-invasive diagnostics of microcirculatory-tissue systems of the human body: questions of metrological and instrumentation provision. <i>Journal of Biomedical Photonics and Engineering</i> , 2016, 2, 040305.	0.7	5
88	Functional status of microcirculatory-tissue systems during the cold pressor test. <i>Human Physiology</i> , 2015, 41, 652-658.	0.4	3
89	A novel excitation-emission wavelength model to facilitate the diagnosis of urinary bladder diseases. , 2015, , .		6
90	Individual variability analysis of fluorescence parameters measured in skin with different levels of nutritive blood flow. <i>Medical Engineering and Physics</i> , 2015, 37, 574-583.	1.7	48

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91	Evaluating adaptation options of microcirculatory-tissue systems based on the physiological link of nutritive blood flow and redox ratio. Proceedings of SPIE, 2015, , .	0.8	0
92	The study of synchronization of rhythms of microvascular blood flow and oxygen saturation during adaptive changes. Proceedings of SPIE, 2014, , .	0.8	0
93	Is there a stimulation of blood microcirculation at low level laser irradiation. Proceedings of SPIE, 2014, , .	0.8	1
94	Method and Device for Metrological Control of Laser Doppler Flowmetry Devices. Bio-Medical Engineering, 2014, 48, 191-195.	0.5	2
95	Investigating tissue respiration and skin microhaemocirculation under adaptive changes and the synchronization of blood flow and oxygen saturation rhythms. Physiological Measurement, 2014, 35, 607-621.	2.1	39
96	<i>In vivo</i> noninvasive measurement of skin autofluorescence biomarkers relate to cardiovascular disease in mice. Journal of Microscopy, 2014, 255, 42-48.	1.8	12
97	Novel measure for the calibration of laser Doppler flowmetry devices. , 2014, , .		6
98	Substantiation of medical and technical requirements for noninvasive spectrophotometric diagnostic devices. Journal of Biomedical Optics, 2013, 18, 107009.	2.6	27
99	Laser reflectance oximetry and Doppler flowmetry in assessment of complex physiological parameters of cutaneous blood microcirculation. , 2013, , .		5
100	Metrological Support of Methods and Devices for Noninvasive Medical Spectrophotometry. Bio-Medical Engineering, 2010, 44, 66-70.	0.5	13
101	Method and installation used for testing of the absorbed dose of radiation during low-level laser therapy. , 2007, 6440, 253.		0